

## **Table of Contents**

<b><u>Section</u></b>	<b><u>Page</u></b>
3.1 PROJECT REPORTS .....	3.1(1)
3.1.1 <u>Preliminary Field Review Report</u> .....	3.1(1)
3.1.1.1 General .....	3.1(1)
3.1.1.2 Format/Content .....	3.1(2)
3.1.2 <u>Alignment Review Report</u> .....	3.1(10)
3.1.2.1 General .....	3.1(10)
3.1.2.2 Format/Content .....	3.1(10)
3.1.3 <u>Scope of Work Report</u> .....	3.1(16)
3.1.3.1 General .....	3.1(16)
3.1.3.2 Format/Content .....	3.1(20)
3.1.4 <u>Plan-in-Hand Report</u> .....	3.1(25)
3.1.4.1 General .....	3.1(25)
3.1.4.2 Format/Content .....	3.1(26)
3.1.5 <u>Final Plan Review Report</u> .....	3.1(28)
3.2 CORRESPONDENCE .....	3.2(1)
3.2.1 <u>In-house Memoranda</u> .....	3.2(1)
3.2.1.1 General .....	3.2(1)
3.2.1.2 Signatures .....	3.2(1)
3.2.1.3 Distribution .....	3.2(1)
3.2.2 <u>Outside Correspondence</u> .....	3.2(2)
3.2.2.1 General .....	3.2(2)
3.2.2.2 Signatures.....	3.2(3)

**Table of Contents**  
(Continued)

<b><u>Section</u></b>		<b><u>Page</u></b>
3.3	MEETINGS .....	3.3(1)
3.3.1	<u>Project Review Meetings</u> .....	3.3(1)
3.3.2	<u>Staff Meetings</u> .....	3.3(1)
3.4	PROJECT WORK TYPE CODES .....	3.4(1)

## **Chapter Three**

# **ADMINISTRATIVE POLICIES AND PROCEDURES**

This Chapter discusses several items related to the operational practices for the Department's Road Design Section. It contains information on the preparation of in-house project reports, outside correspondence, memoranda, meetings and project work types.

### **3.1 PROJECT REPORTS**

This section provides information on how to prepare the Department's project reports including the Preliminary Field Review Report, Alignment Review Report, Scope of Work Report, Plan-in-Hand Report and Final Plan Review Report. When used as described, this information will provide consistent, accurate and appropriate project reports.

#### **3.1.1 Preliminary Field Review Report**

##### **3.1.1.1 General**

A preliminary field review is conducted after a project is nominated to determine major design features, project-related issues and potential problems. Representatives attending the review are summarized in Section 3.1.1.2. The Preliminary Field Review (PFR) Report provides written documentation of all major determinations made during the preliminary field review meeting. It should list the major project design features and provide a general overview of proposed major improvements for the highway. The following procedures will apply:

1. Preparation. The Area Project Supervisor, or designee, is responsible for the preparation of the PFR Report. Organize the Report using the format discussed in Section 3.1.1.2.
2. Signature. The PFR Report is prepared for the Road Design Engineer's signature.
3. Approval. The Road Design Engineer will forward the PFR Report to the Preconstruction Engineer for his approval.

4. Distribution. After the Preconstruction Engineer has approved the Report, copies of the PFR Report will typically be distributed to the preconstruction project file and to the following individuals:
- a. Road Design Engineer,
  - b. Operations Engineer,
  - c. all Engineering Bureau Chiefs,
  - d. Preconstruction Design Engineer,
  - e. District Administrator,
  - f. Rail, Transit and Planning Division Administrator,
  - g. Environmental Services Engineer/Supervisor
  - h. all parties involved in the field review,
  - i. Manager, Engineering Management Unit,
  - j. Tribal Affairs Coordinator (as appropriate),
  - k. ADA Coordinator,
  - l. FHWA (NHS projects), and
  - m. any other individuals or units deemed appropriate.
5. Comments. All parties receiving a copy of the PFR Report are requested to provide comments on the Report. Concurrence of the Report will be assumed if no comments are received by the specified date.

#### **3.1.1.2 Format/Content**

In general, prepare the Preliminary Field Review (PFR) Report in the order and format discussed below. This will provide a uniform presentation for all Department PFR Reports and will ensure that all appropriate information will be addressed. Not all of the subject areas listed below will be required for every PFR Report, and adjustments will need to be made to the Report as deemed necessary. The level of coverage for each item will also vary from project-to-project. Although in-depth coverage of the individual design details is usually not included in this Report, sufficient detail still must be provided to allow the reader to fully understand the proposed project.

Figure 3.1A illustrates the preferred heading and approval format that should be used when preparing the PFR Report. The preparer should note that the heading will need to be completely filled out, including the project number, project name, control number and project work type number.

Montana Department of Transportation  
Helena, Montana 59620-1001

Memorandum

To: (Name)  
Preconstruction Engineer

From: (Name)  
Road Design Engineer

Date: (Date signed by Road Design Engineer)

Subject: (Project Number)  
(Project Name)  
(Control Number)  
(Project Work Type Number)

We request that you approve the Preliminary Field Review Report for the subject project.

Approved \_\_\_\_\_ Date \_\_\_\_\_  
(Name)  
Preconstruction Engineer

We are requesting comments from the following individuals, who have also received a copy of the Report. We will assume their concurrence if no comments are received by (Date).

(Distribution List)

**Preliminary Field Review Report**

The field review for the subject project was held ...

(Body of Report)

**PRELIMINARY FIELD REVIEW REPORT MEMORANDUM**

**Figure 3.1A**

The following provides the topic areas, in order, that should be addressed in the PFR Report:

1. Introduction. The introduction should include the date of the field review and provide a list of individuals who attended the review. The listing should also include the individual's title, organization and office location. Depending on the project, representatives at a field review will include:
  - a. the Area Project Supervisor,
  - b. the District Administrator,
  - c. the Division Maintenance Chief,
  - d. the Engineering Services Engineer/Supervisor,
  - e. a representative from the Consultant Design Section,
  - f. a representative from the Hydraulics Section,
  - g. a representative from the Bridge Bureau,
  - h. a representative from the Environmental Services,
  - i. a representative from the Right-of-Way Bureau,
  - j. a representative from the Geotechnical Section,
  - k. a representative from the Civil Rights Bureau (ADA Coordinator),
  - l. the Tribal Affairs Coordinator,
  - m. a representative from the District Construction Office,
  - n. a representative from FHWA (if applicable),
  - o. local officials (if deemed appropriate), and
  - p. others as deemed appropriate.
2. Proposed Scope of Work. This section should provide a very brief description of the proposed scope of work for the project and/or the project intent. For example, "The proposed project has been nominated to provide an overlay and roadside safety enhancements." Also include a brief discussion explaining the reason(s) why the proposed scope of work was selected.

If it is determined that an outside consultant should be considered for the design of the project, provide a division of expected responsibilities between MDT and the consultant.
3. Project Location and Limits. Some of the descriptions that may be used to briefly describe the project location include:
  - a. county name;

- b. city/town name;
- c. Indian reservation;
- d. route number;
- e. functional classification;
- f. reference points\*;
- g. project length;
- h. crossing routes and/or local streets;
- i. distances from major bridges on the route;
- j. distance and direction from nearby towns/cities;
- k. as-built project numbers;
- l. adjacent project numbers; and
- m. direction of the proposed project.

\* *The milepost system is now referred to as the reference point system and should not be converted to metric (e.g., Milepost 10 is now referred to as Reference Point 10). Identify locations by soft converting the measurement to and from existing reference points (e.g., the project begins 31 meters east of Reference Point 10).*

Where the stationing proceeds in the opposite direction from the reference points (e.g., stationing increases from south to north while the reference points increase from north to south), note this in the Report.

4. Physical Characteristics. A brief description of the project's physical characteristics may include a discussion of the following:

- a. year when the existing road/bridge was built or reconstructed and when it was last overlaid or rehabilitated;
- b. pavement width and number of lanes;
- c. surface types and thicknesses;
- d. number and thickness of previous overlays;
- e. the Pavement Management System's pavement condition and treatment recommendations;
- f. general terrain of the area;

- g. rural or urban location;
  - h. general description of the existing horizontal and vertical alignment, including all features which do not meet the proposed design criteria;
  - i. number of locations where the existing grade exceeds the proposed design maximum;
  - j. maximum gradient on the project;
  - k. general description of the existing fill and cut slopes, including slope rates, fill heights and cut depths;
  - l. lengths and widths of existing bridges;
  - m. any other unique physical characteristics related to the project; and
  - n. special features within the project limits (e.g., National Forest, State Parks, etc.).
5. Traffic Data. The traffic data listed in the PFR Report should include the following:
- a. current AADT,
  - b. letting date AADT,
  - c. design year AADT,
  - d. DHV,
  - e. traffic distribution,
  - f. number and percent of trucks,
  - g. the expected daily 8165 kg Equivalent Single Axle Load (ESAL), and
  - h. basis of projected traffic growth.
6. Crash History. This section should briefly summarize the following crash history data:
- a. number of crashes;
  - b. types of crashes;
  - c. listing of locations with an unexpectedly high number of crashes;
  - d. overall crash and severity rates for the project location;



- e. average statewide crash and severity rates for similar routes, if available;
  - f. a description of how the project compares to the statewide averages; and
  - g. a brief description of why a higher than normal number of crashes may be occurring and proposed countermeasures to be investigated.
7. Major Design Features. The PFR Report should provide a general discussion for each of the following design features, if pertinent:
- a. Design Speed. This section should provide the expected design speed for the project. If more than one design speed is selected for the project, then clearly identify the termini for each design speed selected. For existing facilities, also identify the existing posted speed limit.
  - b. Horizontal Alignment. Identify all the major horizontal features for the proposed project, including all features which may not meet the proposed design criteria. The discussion should also indicate the roadway alignment that can be reasonably obtained and possible methods for improving the horizontal alignment. The utilization of a new alignment, offset and parallel to the existing alignment, should be discussed for all reconstruction projects.
  - c. Vertical Alignment. Provide a description for all the major vertical alignment features on the proposed project. This discussion may identify any grades which exceed the design criteria, the vertical alignment that can be reasonably obtained and possible methods for improving the vertical alignment.
  - d. Typical Sections. Provide a discussion for the proposed typical section(s) of the project. This includes the overall roadway width, travel lane widths, shoulder widths, two-way left-turn lanes, medians, side slopes, sidewalks, etc. Include separate descriptions where there are significant changes in the typical section (e.g., changes in lane widths).
  - e. Geotechnical Considerations. This section should provide a brief listing of the major geotechnical considerations and techniques that may be required to construct the project (e.g., slope stability options).
  - f. Hydraulics. Unless provided in the Location Hydraulics Study Report, provide a discussion for the major hydraulic design elements on the project. If the Location Hydraulics Study Report is attached, this section of

the PFR Report will only need to list the major hydraulic features of the project (e.g., bridge replacement, culvert replacements greater than 2100 mm).

- g. **Bridges.** If there are bridges on the project, include a description of the proposed work to be performed on each bridge. The description should also discuss the need for sidewalks, bicycle paths, utilities or any special features that may be included on the bridge. This section should also address any structural removals.
  - h. **Traffic.** Provide a brief discussion for each intersection which has been proposed for major revisions (e.g., adding turning lanes, changing an existing "Y" intersection to a "T"). In addition, this section should address all major traffic control devices that may be used within the project (e.g., traffic signals, highway lighting, major signs).
  - i. **Pedestrian/Bicycle/ADA.** Discuss impacts to existing facilities. Discuss implementation of new ADA features. Where there are no existing pedestrian or bicycle facilities and if there is evidence of use, include a proposal for their accommodation.
  - j. **Miscellaneous Features.** This section should provide a discussion for all major design elements which are not identified in one of the above design areas. Miscellaneous features may include mailbox turnouts, on-street parking, accessibility requirements, retaining walls, fencing, etc.
- 8. **Design Exceptions.** If known at this stage, list all proposed design exceptions with a brief discussion of why an exception is considered necessary.
  - 9. **Right-of-Way.** Briefly describe the existing and proposed right-of-way widths. Include separate descriptions where the existing or proposed right-of-way is significantly different between various typical sections. If known, provide a listing of the major right-of-way acquisitions (e.g., taking of commercial property). In addition, identify the proposed access control classification for the highway.
  - 10. **Utilities/Railroads.** Include a listing of known utility and/or railroad companies that may be affected by the project. Also describe any railroad crossing and the type of signing/signalization. For utilities, note their location and how they may affect the project.
  - 11. **Environmental Considerations.** Identify any major environmental concerns on the project (e.g., hazardous waste, waterways, wetlands, archaeological/cultural

- sites). List all proposed measures that should be evaluated to avoid and minimize impacts to wetlands. The need for obtaining a consultant to prepare the environmental documents should also be addressed.
12. Traffic Control. Identify the proposed traffic control procedure planned for the construction zone (e.g., detours, lane closures, shifting traffic, crossovers).
  13. Survey. Address the need for a survey and the recommended survey methodology. Provide recommended target dates for the survey completion. This section should also discuss the need for other survey types (e.g., soil survey).
  14. Public Involvement. This section should discuss the type of public involvement required. This may include meetings with local officials, an early public involvement meeting and/or a formal public hearing. Also include the proposed approach for distributing project information to the public.
  15. Other Projects. This section should identify all other projects that are currently under construction or will be in the near future that may affect this project.
  16. Preliminary Cost Estimate. Include the estimated cost that has been programmed to construct the project. Also show this estimate using a cost per kilometer basis. The cost estimate should be adjusted using an inflation factor based on the project's anticipated letting date. The construction engineering (CE) cost should be listed separately. The report should also note whether or not the CE cost is included in the total construction cost.
  17. Ready Date. Include the ready date in the Report. The project ready date is typically three months prior to the letting date. The proposed letting date can be obtained from the Engineering Management Unit.
  18. Preliminary Field Review Work Sheet. The Preliminary Field Review Work Sheet should be used as a checklist to identify issues that should be addressed during the Preliminary Field Review. All information noted on the work sheet should be discussed in the PFR Report. It is not necessary to attach the Preliminary Field Review Work Sheet to the PFR Report. A blank Preliminary Field Review Work Sheet form is provided at the end of Section 3.1.
  19. Location Hydraulics Study Report. If available, attach the Location Hydraulics Study Report to the PFR Report. The Location Hydraulics Study Report will be prepared by the Hydraulics Section.

20. Ready Date. Provide the ready date shown in the Project Management System.

### **3.1.2 Alignment Review Report**

#### **3.1.2.1 General**

The Alignment Review (AR) Report provides written documentation of the horizontal and vertical alignment determinations made during the preliminary alignment review meeting. The alignment review is typically only held where major changes to the alignment are proposed. However, a review should also be conducted at this stage in the project's development if significant design issues need to be addressed, even if the alignment and grade will not be altered by the project. The proposed alignment should be submitted to the District Administrator for review. The need for a field review of the proposed alignment will be determined on a project-by-project basis.

1. Preparation. The Area Project Supervisor is responsible for the AR Report, but the designer is typically assigned to prepare the Report. Organize the Report using the format discussed in Section 3.1.2.2.
2. Approval. The designer will submit the AR Report to the Road Design Engineer for approval after it has been reviewed by the Area Project Supervisor.
3. Distribution. Copies of the AR Report will typically be distributed to the preconstruction project file and to the following individuals:
  - a. Project Development Engineer,
  - b. all Bureau Chiefs,
  - c. Preconstruction Design Engineer,
  - d. District Administrator,
  - e. Rail, Transit and Planning Division Administrator,
  - f. all parties involved in the review, and
  - g. any other individuals or units deemed appropriate.

#### **3.1.2.2 Format/Content**

In general, prepare the Alignment Review (AR) Report in the sequence and format discussed below. This will provide a uniform presentation for all Department AR Reports and will ensure that all appropriate information will be addressed. Not all subject areas will be covered in every AR Report, and adjustments will need to be made as deemed necessary. The level of coverage for each item may also vary from project-

to-project. Although an in-depth coverage of the design details is usually not provided in this Report, provide sufficient detail to allow the reader to fully understand the proposed project.

Figure 3.1B illustrates the preferred heading and approved format that should be used when preparing an AR Report. The preparer should note that the heading will need to be completely filled out, including the project number, project name, control number and project work type number.

The following provides the topic areas, in order, that should be addressed in the AR Report:

1. Introduction. The introduction should include the date of the field review and a list of those who attended the review, including the individual's title, organization and office location. Typical representatives at an alignment field review may include:
  - a. the Area Project Supervisor;
  - b. the District Administrator;
  - c. the Engineering Services Supervisor;
  - d. the Design Supervisor;
  - e. other design personnel who may be involved with the project;
  - f. the Consultant, for consultant-designed projects;
  - g. FHWA (NHS projects);
  - h. local officials (if deemed appropriate); and
  - i. others as deemed appropriate.
2. Scope of Work. Provide a brief description of the proposed scope of work. For example, "The proposed scope of work for this project is to completely reconstruct the existing roadway." The discussion should also include the selected design speed for project.
3. Project Location and Limits. Some of the descriptions that may be used to briefly describe the project location and limits include:
  - a. county name,
  - b. city/town name,
  - c. Indian reservation,
  - d. route number,
  - e. functional classification,

Montana Department of Transportation  
Helena, Montana 59620-1001

Memorandum

To: (Name)  
Preconstruction Engineer

From: (Name)  
Road Design Engineer

Date: (Date signed by Road Design Engineer)

Subject: (Project Number)  
(Project Name)  
(Control Number)  
(Project Work Type Number)

We request that you approve the Alignment Review Report for the subject project.

Approved \_\_\_\_\_ Date \_\_\_\_\_  
(Name)  
Preconstruction Engineer

We are requesting comments from the following individuals, who have also received a copy of the Report. We will assume their concurrence if no comments are received within two weeks of the approval date.

(Distribution List)

**Alignment Review Report**

The field review for the subject project was held ...

(Body of Report)

**ALIGNMENT REVIEW REPORT MEMORANDUM**

**Figure 3.1B**

- f. reference points,
  - g. project length,
  - h. crossing routes and/or local streets,
  - i. distances from major bridges on the route,
  - j. distance and direction from nearby towns/cities,
  - k. as-built project numbers,
  - l. adjacent project numbers, and
  - m. direction of proposed project.
4. Physical Characteristics. The following elements may be used to briefly describe the physical characteristics of the project location:
- a. general terrain of the area;
  - b. rural or urban location;
  - c. pavement width and number of lanes;
  - d. surface types and thickness;
  - e. generalized descriptions of the horizontal and vertical alignment;
  - f. generalized descriptions of the existing fill and cut slopes, fill heights and cut depths;
  - g. lengths and widths of existing bridges; and
  - h. any other unique physical characteristic related to the project.
5. Horizontal Alignment. One of the primary purposes of the AR Report is to identify the proposed horizontal alignment features on the project. Therefore, this section should provide more detail than other sections of the AR Report. The horizontal alignment elements that should be discussed in detail include:
- a. the relationship of the length of tangent sections to curve locations,
  - b. curve radii,
  - c. alignment shifts,
  - d. existing alignment features, and
  - e. any other major features affected by the horizontal alignment.

The discussion should list the various horizontal alignment design features using the appropriate stations and a brief discussion. For example:

Station 1+20 to 1+75	The alignment will be shifted to the right by 10 m by using a 500 m radius curve. The new alignment will
----------------------	--

allow the construction of a wider roadway template without having the fill slopes encroach into the river channel on the left.

Station 1+75 to 3+00

This tangent section is approximately 10 m right of the existing alignment to avoid a conflict with the overhead power line which is parallel to the roadway on the left.

6. Vertical Alignment. Discussion of the vertical alignment is also a primary objective of the AR Report. Therefore, the discussion should be similar to that shown for horizontal alignment in Comment #5. Some of the vertical alignment elements that should be discussed include:
  - a. raising or lowering of the existing vertical alignment,
  - b. an identification of the grades,
  - c. proposed steepening or flattening of existing grades,
  - d. general vertical curvature requirements,
  - e. depth of special subgrade excavations,
  - f. relationship to the horizontal alignment, and
  - g. any other major features affected by the vertical alignment.
7. Surfacing and Typical Section. Briefly summarize the pavement recommendations developed by the Pavement Analysis Section, including any surfacing and/or subgrade recommendations. The discussion should also include the recommended cross slopes and side slopes for the project. Separate discussions may be required if there are significant changes in the typical section or if there is a need for an additional soil survey.
8. Grading. This section should provide any information on how grading may affect the horizontal and vertical alignment. Some of the factors that may be addressed include:
  - a. type of excavation,
  - b. special soil considerations which may require shifting the alignment, and
  - c. proposed balance points.
9. Hydraulics. Provide a discussion on how the hydraulic design may affect the roadway alignment. This includes:



- a. major hydraulic structures (e.g., bridges over waterways, large culverts, irrigation channels);
  - b. waterway alignment changes;
  - c. flooding potential; and
  - d. permit needs for alignment revisions.
10. Bridges. If there is a bridge within the project limits, address how the bridge will impact the roadway alignment (e.g., increasing the curve radii so that the horizontal curvature is continuous across the bridge, bridge end elevations as vertical control points).
11. Traffic. Identify any revisions to the roadway alignment required to provide proper intersection alignment and profile designs, or how the alignment may impact existing traffic control devices.
12. Miscellaneous. Address any miscellaneous items relative to the design which have not been previously discussed.
13. Design Exceptions. If known at this stage, discuss the need for any proposed horizontal and vertical alignment design exceptions.
14. Right-of-Way. The right-of-way discussion should address how the proposed roadway alignment will affect the existing and proposed right-of-way limits.
15. Utilities/Railroads. Provide a discussion on how the proposed alignment will affect known utilities and/or railroads.
16. Environmental Considerations. The Report should address all major environmental concerns that are affected by the roadway alignment. The Report should summarize the measures taken to avoid and minimize impacts to wetlands. Also discuss where and why avoidance or minimization is not feasible. Identify the depth of environmental study required for the project (e.g., categorical exclusion, environmental assessment, environmental impact statement).
17. Traffic Control. Discuss how the proposed roadway alignment will impact the proposed traffic control strategy during construction (e.g., detours, crossovers).
18. Public Involvement. If held, briefly summarize the results of the public informational meeting. Also document the need for any further public involvement (e.g., the need for a public hearing).

19. Cost Estimate. Update the PFR cost estimate using the more detailed grading and surfacing quantities.
20. Ready Date. Provide the ready date shown in the Project Management System.

### **3.1.3 Scope of Work Report**

#### **3.1.3.1 General**

The Scope of Work (SW) Report identifies the major design features of the subject project and provides an overview of the project improvements. The project design will proceed as described in the Report unless opposition is expressed within the specified comment period. Any disagreement in the scope of the project must be resolved prior to the final approval by the Chief Engineer of the Engineering Division. Consequently, it is essential that the Scope of Work Report be written as soon as the appropriate data is available.

The designer should use the following procedure to prepare the SW Report and to obtain management approval of the Report:

1. The Area Project Supervisor, who is responsible for the preparation of the SW Report, will typically designate the designer to prepare the preliminary draft of the Report and all appropriate distribution memorandums.
2. The Area Project Supervisor will review the Report, make all necessary changes and forward it to the Road Design Engineer.
3. The Road Design Engineer will initial the SW Report Memorandum and forward it to the Preconstruction Engineer.
4. The Preconstruction Engineer will review and initial the distribution memorandum requesting concurrence from the Bureau Chiefs and District Administrator. The distribution memorandum is a separate memorandum which is also prepared by the Area Project Supervisor, or designee, and submitted with the SW Report. Figure 3.1C illustrates the format that should be used for distributing the Report to the appropriate individuals. At this step, copies of the SW Report will typically be distributed to those individuals listed in Figure 3.1C. Concurrence from the FHWA is required for projects on the National Highway System. A copy of the Scope of Work Report is submitted to the FHWA for all Federal-Aid projects.

Montana Department of Transportation  
Helena, Montana 59620-1001

Memorandum

To: Distribution

From: (Name)  
Preconstruction Engineer

Date: (Date signed by Preconstruction Engineer)

Subject: (Project Number)  
(Project Name)  
(Control Number)  
(Project Work Type Number)

The Scope of Work Report for the subject project, dated (Date) is attached. We request that those on the distribution review this Report and submit your concurrence by (Date).

Your comments and recommendations are also requested if you do not concur or concur subject to certain conditions.

When all the personnel on the distribution list have submitted their concurrence, this Report will be submitted to the Chief Engineer, Engineering Division for final approval.

Distribution: *	I Recommend Approval
Chief, R/W Bureau,	w/attach
Bureau Chief, Materials,	"
Bridge Engineer,	"
Administrator Maintenance,	"
Administrator, Multimodal	"
Project Analysis & Programming,	"
Manager, Environmental Services,	"
District Administrator,	"
Construction Engineer,	"
FHWA (NHS Projects),	"
	Date _____

  

cc: *	w/attach
Chief Engineer, Engineering Division,	"
Operations Engineer,	"
Preconstruction Engineer,	"
Traffic Engineer,	"
Hydraulics Engineer,	"
Road Design Engineer,	"
Safety Management Engineer,	"
Geotechnical Engineer,	"
Manager, Engineering Management Unit,	"
ADA Coordinator,	"
FHWA (HFO-MT),	"
Preconstruction File,	"

\* In the actual memorandum, use the individual's name versus their title.

**SCOPE OF WORK REPORT DISTRIBUTION MEMORANDUM**  
**(Initial Report)**  
**Figure 3.1C**

Montana Department of Transportation  
Helena, Montana 59620-1001

Memorandum

To: Thomas J. Barnard, P.E.  
Chief Engineer, Engineering Division

From: David S. Johnson  
Preconstruction Engineer

Date: March 18, 1993

Subject: F 23-3(5)119  
Alzada - West  
Control No. 1396  
Work Type Number - 130

The Scope of Work Report for the subject project is attached with the approval or concurrence from (*Distribution from Figure 3.1C*) Tom Martin, Jim Walther, Jim Hill, Steve Kologi, Bill Strizich, Edrie Vinson, and Don Lovely.

Tom Martin noted that, since right-of-way acquisition will be needed, ties to the section corner would also be required. The survey for these ties is currently in progress.

Jim Hill indicated that the Bridge Bureau has reviewed the bridge over Willow Creek and determined that the structure should be used in place in accordance with the new bridge standards. This bridge provides a 8.5 m roadway width.

Steve Kologi noted that from the revised scope of work it is evident that the project has changed significantly from the originally intended scope. However, he did not recommend that the original project scope be used.

Edrie Vinson noted that the report stated that supplemental documents would be required. Since the original document had not yet been submitted, it will be modified to reflect the changes described in the Report. A supplement will not be necessary. The work that remains to complete the document was also briefly summarized.

With your approval, we will proceed with the design in accordance with the attached Report and the recommendations described in this memo.

**SAMPLE OF SCOPE OF WORK REPORT APPROVAL**

**Figure 3.1D**

Thomas J. Barnard  
Page 2  
March 8, 1993

Approved \_\_\_\_\_ Date \_\_\_\_\_  
Thomas J. Barnard, P.E.  
Chief Engineer, Engineering Division

DSJ:PRF

Attachment

cc:	G.L. Larson,	w/attach	FHWA (HFO-MT),	w/attach
	D.J. Lovely,	"	D.P. Dusek,	"
	D.S. Johnson,	"	E.L. Vinson,	"
	C.S. Peil,	"	J.C. Hill,	"
	S.C. Kologi,	"	W.S. Strizich,	"
	T.E. Martin,	"	R.E. Williams,	"
	J.A. Walther,	"	D.R. McIntyre,	"
	B.F. Juvan,	"	Preconstruction File,	"

**SAMPLE OF SCOPE OF WORK REPORT APPROVAL**  
**(continued)**  
**Figure 3.1D**

5. Once concurrence has been received from the Bureau Chiefs and the FHWA, if applicable, the Area Project Supervisor, or designee, will prepare another memorandum requesting the Chief Engineer's approval for the SW Report. This memorandum is prepared for the Preconstruction Engineer's signature. It should include the comments received and their proposed disposition. Figure 3.1D illustrates a sample memorandum used for requesting approval from the Chief Engineer, Engineering Division. After approval, copies of the SW Report will typically be distributed to the following:
  - a. all Bureau Chiefs, including the Preconstruction Engineer;
  - b. Preconstruction Design Engineer;
  - c. District Administrator;
  - d. Road Design Engineer;
  - e. all necessary Section Heads;
  - f. ADA Coordinator;
  - g. FHWA; and
  - h. the preconstruction project file.

#### **3.1.3.2 Format/Content**

In general, prepare the Scope of Work (SW) Report in the sequence and format discussed below. This will provide a uniform presentation for all Department SW Reports and will ensure that all necessary design elements are addressed. Not all subject areas will be covered in every SW Report, and adjustments will be added as necessary. The level of coverage for each item may also vary from project-to-project. Although an in-depth discussion for each design element is usually not provided in this Report, sufficient detail must be provided to allow the reader to fully understand the proposed project.

The following provides the topic areas, in order, that should be addressed in the SW Report:

1. Proposed Scope of Work. This section should provide a very brief description of the proposed scope of work for the project. For example, "The proposed scope of work for the subject project is to provide a 150 mm overlay and roadside safety enhancements." This section should also include a brief discussion of why the proposed scope of work was selected.
2. Project Location and Limits. The following descriptions may be used to briefly describe the project location and limits:

- a. county name;
- b. city/town name;
- c. Indian reservation;
- d. route number;
- e. functional classification;
- f. reference points;
- g. crossing routes and/or major local streets/interchanges;
- h. project length;
- i. distances from major bridges on the route;
- j. distance and direction from nearby towns/cities;
- k. as-built project numbers;
- l. adjacent project numbers; and
- m. direction of proposed project.

Where the stationing proceeds in the opposite direction from the reference points (e.g., stationing increases from south to north while the reference points increase from north to south), note this in the Report.

3. Physical Characteristics. A brief description of the project's physical characteristics may include a discussion of the following:

- a. year when the existing road/bridge was built or reconstructed and when it was last overlaid or rehabilitated;
- b. pavement width and number of lanes;
- c. existing surface types and thicknesses;
- d. number and thickness of overlays;
- e. general terrain of the area;
- f. rural or urban location;
- g. general description of the existing horizontal and vertical alignment, including all features which do not meet the Department criteria;
- h. number of locations where the existing grade exceeds the applicable maximum;
- i. maximum gradient on the project;
- j. general description of the existing fill and cut slopes, including slope rates, fill heights and cut depths;
- k. lengths and widths of existing bridges; and
- l. any other unique physical characteristics related to the project.

4. Traffic Data. The traffic data in the Report should include the following:
  - a. current AADT,
  - b. letting date AADT,
  - c. design year AADT,
  - d. DHV,
  - e. traffic distribution,
  - f. number and percent of trucks,
  - g. the expected daily 8165 kg ESAL, and
  - h. basis of projected traffic growth.
5. Crash History. This section should briefly summarize the following crash history data:
  - a. number of crashes;
  - b. types of crashes;
  - c. listing of locations with an unexpectedly high number of crashes;
  - d. overall crash and severity rates for the project location;
  - e. statewide average crash and severity rates for similar routes, if available;
  - f. a description of how the project compares to the statewide averages; and
  - g. a brief description of why higher than normal number of crashes may be occurring and proposed countermeasures.
6. Major Design Features. The SW Report should provide a general discussion for each of the following design features. This discussion should also include any approved design exceptions for that design element. Prepare each topic area based on the station sequencing. Although each major design element is provided its own section, the designer should address how the element will interact with other design elements. The SW Report should discuss the following topics:
  - a. Design Speed. This section should present the expected design speed for the project. If more than one design speed is selected for the project, clearly identify the termini for each design speed selected. Also indicate the posted speed limit. If a speed zone study is recommended, it should also be noted.
  - b. Horizontal Alignment. Provide a listing of all the major horizontal features for the proposed project, including all features which will not meet the



proposed criteria. The discussion should also include the maximum design criteria that can be reasonably obtained and the proposed methods for improving the horizontal alignment.

- c. Vertical Alignment. Include a brief description for all the major vertical alignment features on the proposed project. This discussion should identify the maximum design criteria that can be reasonably obtained and the proposed methods for improving the vertical alignment. If truck-climbing lanes are warranted, their location and extent should be described.
- d. Typical Sections. This section should briefly describe the major cross section elements. These include roadway widths, travel lane widths, shoulder widths, two-way left turn lanes, medians, sidewalks, etc. Provide separate descriptions where there are major changes in the typical section.
- e. Surface Design. The pavement design discussion may include a summary of the soils report, including the results from the pavement samples taken on existing highways; the proposed pavement design, including pavement type and thickness; milling depths and widths; recycling considerations; etc.
- f. Grading. This section should discuss the general grading on the project. This may include a discussion on balance points, special excavation, the need for large amounts of borrow, special soil considerations, etc.
- g. Slope Design. Describe the proposed slope design for the project in this section. Typical slope discussions may include slope flattening for guardrail, slope flattening for removal of guardrail, use of a barn roof section, steep side slopes, rock cuts, transverse median slopes, non-standard slope rates, etc.
- h. Geotechnical Considerations. This section should identify the major geotechnical features and problems on the project and any planned techniques that will be used to address these concerns.
- i. Hydraulics. This section should provide a brief summary of the proposed treatment for the hydraulic design elements on the project. These may include bridge replacements over water, culvert replacements, closed drainage systems, irrigation facilities, special roadway designs within flood limits, etc.

- j. Bridges. If there are bridges on the project, provide a description of the proposed work on the bridge for each bridge. The description should also discuss the need for sidewalks, bicycle paths, utilities or any special features that may be included on the bridge. This section should also address any removal of existing structures.
  - k. Safety Enhancements. This section should describe the proposed approach for major safety enhancements. These include the flattening of slopes, removing guardrail, replacing existing guardrail, adding new guardrail, using impact attenuators, using special culvert end treatments, etc.
  - l. Traffic. Provide a brief discussion for each intersection which has proposed major revisions (e.g., adding turn lanes, converting an existing "Y" intersection to a "T"). This section should also address the traffic control devices that will be required for the project including traffic signals, highway lighting, signing (new or reused), standard or special pavement markings, islands, etc.
  - m. Miscellaneous Features. Include a general discussion for all major design elements which are not identified in one of the above design areas. Miscellaneous features may include mailbox turnouts, on-street parking, accessibility requirements, retaining walls, fencing, unusual seeding and sodding requirements, etc.
7. Design Exceptions. This section should identify any approved design exceptions for the project. The design exceptions should also be noted in the individual design areas in Comment #6.
8. Right-of-Way. Briefly describe the existing and proposed right-of-way width requirements. Provide separate descriptions where the existing or proposed right-of-way is significantly different between various typical sections. Also document any major right-of-way acquisitions (e.g., taking of commercial property). In addition, the proposed access control classification for the highway should be identified.
9. Utilities/Railroads. The Report should describe any potential problems relative to utilities and/or railroads. The discussion should also describe what has already been accomplished for utility and railroad companies.
10. Environmental Considerations. Summarize any environmental concerns identified in preliminary environmental documents. If the environmental

document has been approved, include the date and conditions of approval. This section should also provide brief descriptions of any environmental, cultural avoidance and mitigation measures taken as well as treatment of hazardous waste sites.

11. Other Projects. Discuss the resolution of any project conflicts identified in the Preliminary Field Review and/or Alignment Review Reports and determine if the projects can be combined for bid letting.
12. Traffic Control. Provide a discussion on the proposed traffic control strategy planned for the construction zone. This may include the need for detours, lane closures, traffic shifts, crossovers, etc.
13. Public Involvement. This section should summarize any concerns raised during the public involvement meeting. The proposed disposition of each concern should also be included.
14. Cost Estimate. This section should provide the latest cost estimate available for the project. The designer may be required to prepare a detailed estimate for this Report. Adjust the estimate for inflation and indicate the inflation factor used. List the construction engineering cost separately. For urban projects, discuss the city's cost participation for such items as storm drains, manholes and water valves.
15. Ready Date. Include the proposed ready date in the Report. The project ready date is typically three months prior to the letting date.

### **3.1.4 Plan-in-Hand Report**

#### **3.1.4.1 General**

The plan-in-hand review is an in-depth review of all items contained in the project plans and draft special provisions. It typically consists of a sheet-by-sheet office review of the plans followed by a field review. The Area Project Supervisor is responsible for scheduling the plan-in-hand review. The Plan-in-Hand (PIH) Report provides a written documentation of all decisions made during the plan-in-hand office and field review meetings. The PIH Report addresses the concerns and questions raised by the review team and their proposed disposition. Use the following procedures to prepare the PIH Report:

1. Preparation. The designer is responsible for the preparation of the PIH Report. The Area Project Supervisor will review the Report, make all necessary changes and forward it to the Road Design Engineer.
2. Approval. The Road Design Engineer will sign and forward the Report to the Preconstruction Engineer for approval.
3. Format. Figure 3.1E illustrates the preferred heading and approval memorandum format the designer should use when preparing the PIH Report.
4. Distribution. After approval by the Preconstruction Engineer, copies of the PIH Report will typically be distributed to the preconstruction project file and to the following individuals:
  - a. all applicable Bureau Chiefs,
  - b. Preconstruction Design Engineer,
  - c. District Administrator,
  - d. Rail, Transit and Planning Division Administrator,
  - e. all parties involved in the field review,
  - f. any other individuals or sections deemed appropriate, and
  - g. FHWA.

All parties receiving a copy of the PIH Report are requested to provide comments on the Report. Concurrence of the Report will be assumed if no comments are received by the specified date.

#### **3.1.4.2 Format/Content**

When preparing the PIH Report, the designer should consider the following:

1. Combine all office and field review comments into one Report.
2. Combine and present all comments from the office and field reviews in the order in which they appear in the plan sheets. Also present the comments for the plan and profile sheets according to increasing stations down the proposed centerline of the project.
3. The first part of the PIH Report should provide all general comments on the project.

Montana Department of Transportation  
Helena, Montana 59620-1001

Memorandum

To: (Name)  
Preconstruction Engineer

From: (Name)  
Road Design Engineer

Date: (Date signed by Road Design Engineer)

Subject: (Project Number)  
(Project Name)  
(Control Number)  
(Project Work Type Number)

We request that you approve the Plan-in-Hand Report for the subject project.

Approved \_\_\_\_\_ Date \_\_\_\_\_  
(Name)  
Preconstruction Engineer

We are requesting comments from the following individuals, who have also received a copy of the Report. We will appreciate receiving comments from the identified distribution by (Date).

(Distribution List)

**Plan-in-Hand Report**

The plan-in-hand for the subject project was held ...

(Body of Report)

**PLAN-IN-HAND REPORT MEMORANDUM**

**Figure 3.1E**

4. Identify all comments by sheet number and station location. If appropriate, provide the distance from the proposed centerline.
5. The resolution should briefly summarize the problem, question or request raised during the review meeting and state how the designer intends to address the comment.
6. Where practical, identify the individual making the comment.
7. Include all revisions to the special provisions in the PIH Report.
8. Include an updated cost estimate for the project. The estimate should incorporate the latest unit prices provided by the District. Forward a copy of the estimate to the Engineering Management Unit. If the estimate differs substantially from previous estimates, include the reasons for the change in project costs.

### **3.1.5 Final Plan Review Report**

The final plan review is an in-depth review of the final project plans and special provisions. Generally, it will consist of individual plan reviews by everyone on the distribution. Formal plan reviews or field reviews will be scheduled only for very specific circumstances. The reviewers' comments will be submitted to the designer within a specified time period. The Final Plan Review (FPR) Report presents the designer's proposed disposition of the reviewers' comments. At this stage of the project, comments should only be related to the completeness and accuracy of plans.

Responsibilities, approvals, format and distribution of the FPR Report will typically follow the same procedures as described in Section 3.1.4 for the Plan-in-Hand Report.

Montana Department of Transportation  
Preliminary Field Review Work Sheet

Project No. \_\_\_\_\_  
Date of Review \_\_\_\_\_  
Proposed Ready Date \_\_\_\_\_

Project Name \_\_\_\_\_  
Design Assignment \_\_\_\_\_  
Project Work Type \_\_\_\_\_

PROJECT LOCATION

County \_\_\_\_\_

Route Name \_\_\_\_\_

"AS-BUILT" PROJECTS

Identification Number	Station	FROM (Reference Point)	Station	TO (Reference Point)
-----------------------	---------	---------------------------	---------	-------------------------


Begin Station \_\_\_\_\_ End Station \_\_\_\_\_

Begin Reference Point \_\_\_\_\_ End Reference Point \_\_\_\_\_

Length: Urban \_\_\_\_\_, Rural \_\_\_\_\_, Total \_\_\_\_\_

Speed Zones \_\_\_\_\_

Last Major Work \_\_\_\_\_ Improved \_\_\_\_\_

ROADWAY FUNCTIONAL CLASSIFICATION

Type: \_\_\_\_\_ (See Chapter Eight for selection criteria.)

ACCIDENT DATA

Accident Rate \_\_\_\_\_ Avg. Accident Rate – Statewide: \_\_\_\_\_

Severity Rate \_\_\_\_\_ Avg. Accident Rate – Statewide: \_\_\_\_\_

Clusters \_\_\_\_\_

EXISTING GEOMETRIC DESIGN

Type of Surface \_\_\_\_\_

Existing Surface Width \_\_\_\_\_

Horizontal Curves that do not meet MDT criteria \_\_\_\_\_

"As-Built"	P.I. Station	(Reference Point)	Curve	Direction
------------	--------------	-------------------	-------	-----------


Crest Curves that do not meet MDT criteria \_\_\_\_\_

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Montana Department of Transportation  
Preliminary Field Review Work Sheet

Sag Curves that do not meet MDT criteria \_\_\_\_\_

\_\_\_\_\_

Grades that do not meet MDT criteria \_\_\_\_\_

\_\_\_\_\_

Maximum Grade \_\_\_\_\_

Existing Fill Slopes

"As-Built" \_\_\_\_\_

Fill Height \_\_\_\_\_

Slope \_\_\_\_\_

Existing Cut Slopes

"As-Built" \_\_\_\_\_

Cut Depth \_\_\_\_\_

Slope \_\_\_\_\_

Proposed Work (Type of Project) \_\_\_\_\_

Route Segment Plan Pavement Width \_\_\_\_\_ Standard Width \_\_\_\_\_

TRAFFIC DATA

Present AADT \_\_\_\_\_ DHV \_\_\_\_\_ Future AADT/year \_\_\_\_\_

Rural Functional Classification \_\_\_\_\_

Other \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ATTENDED BY

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ROADSIDE HAZARDS (Mailboxes, Utilities, Trees, Rocks, Signs, Culvert Ends, etc.)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Montana Department of Transportation  
Preliminary Field Review Work Sheet

FIELD REVIEW RECOMMENDATION

Design Speed\_\_\_\_\_ Terrain\_\_\_\_\_

Finished Surface Width\_\_\_\_\_

Finish Roadway Width\_\_\_\_\_

Pedestrian Features\_\_\_\_\_

Curb & Gutter\_\_\_\_\_

Overlay Thickness\_\_\_\_\_

Back Slope\_\_\_\_\_

Inslope\_\_\_\_\_

Truck Climbing Lane\_\_\_\_\_

Adjustments (Drains, Valves, etc.)\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Cold Milling\_\_\_\_\_

\_\_\_\_\_

Guardrail (New, Upgrade, Structure, etc.)\_\_\_\_\_

\_\_\_\_\_

Special Considerations\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SURVEY

Aerial Mapping\_\_\_\_\_ Full Survey\_\_\_\_\_ Partial Survey\_\_\_\_\_

Cross Sections\_\_\_\_\_

Pipes: Condition\_\_\_\_\_; Soil Tests\_\_\_\_\_

R-Value\_\_\_\_\_ Corings\_\_\_\_\_

Materials\_\_\_\_\_

Digouts\_\_\_\_\_

Hydraulic Survey\_\_\_\_\_

Target Date of Survey Completion\_\_\_\_\_

Other Items\_\_\_\_\_

\_\_\_\_\_

RIGHT-OF-WAY

Existing R/W Width\_\_\_\_\_

New R/W (Incl. Possible Permits)\_\_\_\_\_

Limited Access\_\_\_\_\_

Railroad Requirements\_\_\_\_\_

Define – “Clear Zone Width”\_\_\_\_\_

\_\_\_\_\_

Montana Department of Transportation  
Preliminary Field Review Work Sheet

Stockpasses:

"As-Built"	Station	(Reference Point)	Type	Remarks
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UTILITIES

Telephone\_\_\_\_\_

Power Poles\_\_\_\_\_

Railroad Conflicts\_\_\_\_\_

Sewer & Water Conflicts\_\_\_\_\_

Other\_\_\_\_\_

M.O.U. with City\_\_\_\_\_

ENVIRONMENTAL ISSUES

Environmental Document Type (will be determined by Environmental Services)\_\_\_\_\_

4(f) Lands\_\_\_\_\_

6(f) Lands\_\_\_\_\_

Wetlands\_\_\_\_\_

Possible Hazardous Waste Sites\_\_\_\_\_

Cultural Survey Required\_\_\_\_\_

Historic Bridges\_\_\_\_\_

Other (Prairie Dogs, Protected Streams, Landmarks, etc.)\_\_\_\_\_

PUBLIC HEARINGS

Formal\_\_\_\_\_ Informational\_\_\_\_\_ News Release\_\_\_\_\_

Montana Department of Transportation  
Preliminary Field Review Work Sheet

TRAFFIC ITEMS

Signing (Upgraded to MUTCD Criteria)\_\_\_\_\_

Lighting, Intersections, Noise, etc.\_\_\_\_\_

GEOMETRIC DESIGN EXCEPTION

Grade\_\_\_\_\_ Fill/Cut Slopes\_\_\_\_\_

Width\_\_\_\_\_ Design Speed\_\_\_\_\_

Vertical Curves\_\_\_\_\_ Clear Zones\_\_\_\_\_

Horizontal Alignment\_\_\_\_\_

Other\_\_\_\_\_

HYDRAULIC INFORMATION

Channel Changes (Station)\_\_\_\_\_

Structures ("As-Built", Station, Reference Point, Type, Replace, Name of Drainage, Detour)

Pipes Over 2100 mm\_\_\_\_\_

Other (Backwater, Debris, etc.)\_\_\_\_\_

Montana Department of Transportation  
Preliminary Field Review Work Sheet

Administer of the Floodplain (county and/or incorporated community)\_\_\_\_\_

Materials and Geotechnical Considerations\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_:\_\_\_\_:\_\_\_\_

## **3.2 CORRESPONDENCE**

### **3.2.1 In-house Memoranda**

#### **3.2.1.1 General**

Memoranda are used by MDT to provide written, interdepartmental information between the various Bureaus, Sections, Districts, etc. They are used to distribute project reports, process approval requests, request project information, submit project information, distribute policies and for informational purposes. Each Bureau and Section has established its own policies for circulating incoming mail. In general for the Road Design Section, the Preconstruction Engineer's staff will review incoming memoranda to determine who needs additional copies.

#### **3.2.1.2 Signatures**

For outgoing memoranda, the Preconstruction Bureau has established the following signature requirements:

1. All memoranda containing substantive materials for distribution outside of the Preconstruction Bureau and for Bureau-wide general information will require the Preconstruction Engineer's signature.
2. All memoranda containing substantive materials for distribution outside of the Section, but within the Bureau, and for Section-wide general information will require the Section Head's Signature.
3. All general project correspondence, including those to the Districts, project information requests, and general day-to-day forms, may be signed by the Area Project Supervisor.
4. All correspondence originating in the Districts will be signed by the District Administrator.

#### **3.2.1.3 Distribution**

The Preconstruction Bureau has established the following procedure for distribution of outgoing memoranda:

1. Project Information Submitted to Others. Memoranda providing project information to the Districts, other Bureaus or Sections should also include a copy to the following:
  - a. Preconstruction Engineer,
  - b. Preconstruction Design Engineer,
  - c. Road Design Engineer,
  - d. District Administrator,
  - e. the preconstruction project file, and
  - f. others as needed.
2. Project Information Requests. Memoranda requesting project information from the Districts, other Bureaus or Sections should also include a copy to the following:
  - a. Road Design Engineer,
  - b. District Administrator,
  - c. the preconstruction project file, and
  - d. others as needed.
3. District Correspondence. All correspondence sent to the District will be addressed to the District Administrator.
4. General Information. Distribution and copies of other memoranda types will be determined on a case-by-case basis.

### **3.2.2 Outside Correspondence**

#### **3.2.2.1 General**

In general, prepare all written materials for sources outside of the Department on MDT letterhead. Letters for the Governor's signature will be on the Governor's letterhead.

The writer must exercise common sense when preparing outside correspondence to match the reader's understanding. Department letters will often be written to individuals without a transportation background; therefore, the letter should use terminology which is understandable to the general public. In contrast, letters and surveys to AASHTO, FHWA, TRB, etc., should use standard highway engineering terminology.

### **3.2.2.2 Signatures**

In general, all letters will be forwarded through the chain of command to the individual signing the correspondence. The following presents the Department's policy for the signing of all out-going letters:

1. Letters to U.S. Congressmen, the Governor and legislators will be signed by the Director.
2. Letters responding to citizen inquiries will be signed by the Preconstruction Engineer or a higher level, depending on who initially received the letter.
3. Letters which provide substantive information to towns, counties or local officials should be signed by the Preconstruction Engineer. Routine project information sent to towns, counties or local officials may be signed by the Section Head.
4. Information requested by the news media should be signed by the Preconstruction Engineer or a higher level. General news releases may be signed by the Section Head.
5. Information to Federal and State agencies, AASHTO, TRB, other State DOT's, etc., should be signed by the Preconstruction Engineer.
6. Project information submitted to consultants, contractors, suppliers, etc., should be signed by the Section Head.





### **3.3 MEETINGS**

Good communication is a necessity. It is imperative that all meetings be well planned, attended by the proper individuals, and the information disseminated to the affected people in a timely manner. The following provides additional information for project and staff meetings in the Road Design Section.

#### **3.3.1 Project Review Meetings**

During project design, there are typically several meetings to allow others to review the project design. MDT formal review meetings include the Preliminary Field Review, the Alignment Review, the Plan-in-Hand Review and the Final Plan Review. In addition, informal meetings are often initiated to gather or disseminate information between the affected parties.

In general, the Area Project Supervisor will be responsible for arranging the meeting, determining the location, leading the meeting and documenting the concerns and decisions made during the meeting. Section 3.1 provides the procedures for reporting the results of major project meetings. For informal meetings, a memorandum documenting the decisions made during the meeting should be submitted to those involved with copies distributed to the project file and other individuals as deemed necessary.

#### **3.3.2 Staff Meetings**

Staff meetings are held to disseminate design and administrative information, discuss design problems, discuss policy changes and discuss personnel concerns. Staff meetings are typically held monthly. These meetings are typically attended by the Road Design Engineer, Area Project Supervisors, Design Supervisors and others as needed.

Individuals who have questions, concerns or ideas that may need to be addressed during the staff meeting should first discuss, or submit in writing, their ideas to the Area Project Supervisor. If deemed appropriate for the Road Design Section staff meeting, the interested party or the Area Project Supervisor will request, in writing at least one week in advance of the meeting, that the Road Design Engineer add the item to the next monthly meeting agenda. The Road Design Engineer will provide a written agenda to the Area Project Supervisors and Design Supervisors approximately two days prior to the meeting. This will allow all attendees time to review the agenda and properly prepare any responses before attending the meeting.



### **3.4 PROJECT WORK TYPE CODES**

All project documents are required to provide the project work type number in the subject portion of a memorandum. Figure 3.4A provides a listing of the standardized project work type codes used by the Department. The applicable project work type number will be determined during the Preliminary Field Review. It may be revised for the Scope of Work Report.

The Engineering Management Unit will use the Preliminary Field Review and Scope of Work Reports to input the project work type number into the Department's Project Master File. Changes to the project work type after the Scope of Work Report has been approved must be agreed upon by the Engineering Management Unit and Fiscal Programming Unit. If there are any questions concerning assigning or changing project work type number, contact the Engineering Management Unit.

Number	Description
<b>Roadway</b>	
110	New Construction
111	New Construction – Facilities
120	Relocation
130	Reconstruction – With Added Capacity
140	Reconstruction – Without Added Capacity
141	Reconstruction – Remove and Replace Culverts
150	Major Widening
160	Minor Widening
170	Restoration and Rehabilitation – PCCP
171	Restoration and Rehabilitation – Subgrade
172	Restoration and Rehabilitation – Facilities
180	Resurfacing – Asphalt (including Safety Improvements)
181	Resurfacing – Asphalt (Thin Lift $\leq 0.15$ ft or 45 mm)
182	Resurfacing – PCCP
183	Resurfacing – Seal & Cover
184	Resurfacing – Gravel
185	Resurfacing – Crack Sealing
<b>Bridges</b>	
210	New Bridge
220	Bridge Replacement
221	Bridge Replacement & Reconstruct Approaches ( $\geq 0.1$ mile or 0.16 km)
222	Bridge Replacement & Pavement Preservation on Approaches ( $< 0.1$ mile or 0.16 km)
223	Bridge Replacement with Culvert
230	Major Bridge Rehabilitation
231	Major Bridge Rehabilitation & Reconstruct Approaches ( $\geq 0.1$ mile or 0.16 km)
232	Major Bridge Rehabilitation & Pavement Preservation on Approaches ( $< 0.1$ mile or 0.16 km)
240	Minor Bridge Rehabilitation
241	Minor Bridge Rehabilitation & Reconstruct Approaches ( $\geq 0.1$ mile or 0.16 km)
242	Minor Bridge Rehabilitation & Pavement Preservation on Approaches ( $< 0.1$ mile or 0.16 km)
<b>Safety</b>	
310	Roadway & Roadside Safety Improvements
311	Railroad/Highway Crossing Safety Improvements
312	Structure Safety
313	Pedestrian and Bicycle Safety
<b>Traffic Operation &amp; Control Systems</b>	
410	Traffic Signals and Lighting
411	Signing, Pavement Markings, Chevrons, etc.
412	Miscellaneous Electronic Monitoring or Information Services
<b>Environmental</b>	
510	Environmental
520	Landscaping, Beautification
<b>Miscellaneous</b>	
610	Maintenance Stockpiles
620	Bicycle and Pedestrian Facilities
630	CTEP – Monitoring and Inspection
640	Bridge Maintenance Safety Inspection
650	Miscellaneous Study Programs
660	Historic Preservation

### PROJECT WORK TYPE CODES

Figure 3.4A